

IN THE CLAIMS —

Please amend the claims as follows:

1. (currently amended) A self-adhesive prepreg for bonding to a honeycomb that comprises a plurality of walls having honeycomb surfaces to which said self-adhesive prepreg is bonded, said self-adhesive prepreg comprising:

at least one fiber layer;

a prepreg resin which has been combined with said fiber layer to form said self-adhesive prepreg which includes a bonding surface that is adapted to be bonded directly to said honeycomb surfaces wherein said prepreg resin forms fillets during bonding of said prepreg to said honeycomb surfaces wherein said fillets have an A dimension in the direction extending paralell to said prepreg bonding surface and a B dimension in the direction extending perpindicular to said prepreg bonding surface along said walls, said prepreg resin comprising a thermosetting resin, a curing agent, a thermoplastic viscosity control agent which is substantially dissolved in said thermosetting resin , said thermoplastic viscosity control agent being selected from the group consisting of polyetherimides and micronized polyethersulfone; and

thermoplastic fillet forming particles which are not dissolved to a substantial degree in said prepreg resin wherein said fillet forming particles dissolve during curing of said prepreg resin to form fillets wherein said A dimension is approximately equal to said B dimension and wherein the amounts of said resin dissolved thermoplastic viscosity control agent and said thermoplastic fillet forming particles are such that the minimum viscosity of said prepreg resin during curing thereof is between 150-1500 poise.

2. (previously presented) A self-adhesive prepreg according to claim 1 wherein said thermosetting resin is selected from the group consisting of epoxy, bismaleimide and cyanate ester resins.

3. (original) A self-adhesive prepreg according to claim 1 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified and micronized thermoplastic particles which have a glass transition temperature that is above 200°C.

4. (original) A self-adhesive prepreg according to claim 1 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified polyether sulfone, micronized polyether sulfone and densified polyetherimide.

5. (original) A self-adhesive prepreg according to claim 3 wherein said thermoplastic fillet forming particles have particle sizes ranging from 1 to 100 microns.

6. (previously presented) A self-adhesive prepreg according to claim 1 wherein said prepreg resin comprises an epoxy thermosetting resin, a micronized polyethersulfone viscosity control agent and densified polyether sulfone fillet forming particles.

7. (canceled)

8. (previously presented) A self-adhesive prepreg according to claim 1 wherein said minimum viscosity of said prepreg resin is between 300 to 1200 poise.

9. (original) A self-adhesive prepreg according to claim 1 wherein said thermoplastic fillet forming particles are located substantially at said bonding surface of said prepreg.

10. (previously presented) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 1 is bonded

and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

11. (previously presented) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 2 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

12. (previously presented) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 3 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

13. (previously presented) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 4 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

14. (previously presented) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 5 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

15. (previously presented) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 6 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

16. (previously presented) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 8 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

17. (currently amended) A method for adhesively bonding a prepreg face sheet to a honeycomb that comprises a plurality of walls having honeycomb surfaces to which said self-adhesive prepreg is bonded, said method comprising the steps of:

forming a self-adhesive prepreg comprising providing at least one fiber layer and a prepreg resin wherein said prepreg resin is combined with said fiber layer to form said self-adhesive prepreg comprising a bonding surface which is adapted to be bonded directly to said honeycomb surfaces wherein said prepreg resin forms fillets during bonding of said prepreg to said honeycomb surfaces wherein said fillets have an A dimension in the direction extending parallel to said prepreg bonding surface and a B dimension in the direction extending perpendicular to said prepreg bonding surface along said walls, said prepreg resin comprising a thermosetting resin, a curing agent, a thermoplastic viscosity control agent selected from the group consisting of polyetherimides and micronized polyether sulfone, said thermoplastic viscosity control agent being substantially dissolved in said thermosetting resin and thermoplastic fillet forming particles which are not dissolved to a substantial degree in said prepreg resin wherein said fillet forming particles dissolve during curing of said prepreg resin;

bonding said self-adhesive prepreg to said honeycomb wherein said bonding comprises curing said self-adhesive prepreg for a sufficient time and at a sufficient temperature to substantially dissolve said fillet forming particles to form fillets wherein said A dimension is approximately equal to said B dimension and wherein the amounts of said resin dissolved thermoplastic viscosity control agent and said thermoplastic fillet forming particles are such that the minimum viscosity of said prepreg resin during curing thereof is between 150-1500 poise.

18. (previously presented) A method according to claim 17 wherein said thermosetting resin is selected from the group consisting of epoxy, bismaleimide and cyanate ester resins.

19. (original) A method according to claim 17 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified and micronized thermoplastic particles which have a glass transition temperature that is above 200°C.

20. (original) A method according to claim 17 wherein said thermoplastic fillet forming particles are selected from the group consisting of densified polyether sulfone, micronized polyether sulfone and densified polyetherimide.

21. (original) A method according to claim 18 wherein said thermoplastic fillet forming particles have particle sizes ranging from 1 to 100 microns.

22. (previously presented) A method according to claim 17 wherein said prepreg resin comprises an epoxy thermosetting resin, a micronized polyethersulfone viscosity control agent and densified polyether sulfone fillet forming particles.

23. (previously presented) A cured honeycomb sandwich panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 1 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin and wherein said honeycomb exhibits a core crush of less than 5%.

24. (previously presented) A cured honeycomb sandwich panel according to claim 23 wherein the at least one fiber layer comprises a fabric layer comprising three thousand filament, six thousand filament or twelve thousand filament carbon fabric.

25. (original) A cured honeycomb sandwich panel according to claim 24 wherein said fabric layer comprises 6K or 12 K carbon fabric and said honeycomb exhibits a core crush which is essentially 0%.

26. (previously presented) A self-adhesive prepreg according to claim 1 wherein said thermosetting resin comprises tetraglycidyl-diaminodiphenyl-methane.

27. (previously presented) A self-adhesive prepreg according to claim 1 wherein said curing agent comprises dicyandiamide.

28. (previously presented) A self-adhesive prepreg according to claim 27 wherein said curing agent comprises dicyandiamide and 3,3'-diaminodiphenylsulfone.

29. (previously presented) A self-adhesive prepreg according to claim 1 wherein said resin comprises:

10 to 40 parts by weight of a trifunctional epoxy resin;

10 to 40 parts by weight of a difunctional epoxy resin;

11 to 25 parts by weight of an aromatic curing agent;

0 to 3 parts by weight of a non-aromatic curing agent;

5 to 15 parts by weight of said thermoplastic viscosity control agent wherein said thermoplastic viscosity control agent comprises micronized polyethersulfone; and

8 to 30 parts by weight of said thermoplastic fillet forming particles.

30. (original) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 9 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

31. (original) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 26 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

32. (original) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 27 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

33. (original) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 28 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

34. (original) A cured honeycomb panel comprising a core having at least one face to which a self-adhesive prepreg made according to claim 29 is bonded and wherein said self-adhesive prepreg has been cured so that said thermoplastic fillet forming particles are substantially dissolved in said prepreg resin.

35. (previously presented) A method according to claim 17 wherein said thermosetting resin comprises tetraglycidyl-diaminodiphenyl-methane.

36. (previously presented) A method according to claim 17 wherein said curing agent comprises dicyandiamide.

37. (previously presented) A method according to claim 36 wherein said curing agent comprises dicyandiamide and 3,3'-diaminodiphenylsulfone.

38. (previously presented) A method according to claim 17 wherein said prepreg resin comprises:

10 to 40 parts by weight of a trifunctional epoxy resin;

10 to 40 parts by weight of a difunctional epoxy resin;

11 to 25 parts by weight of an aromatic curing agent;

0 to 3 parts by weight of a non-aromatic curing agent;

5 to 15 parts by weight of said thermoplastic viscosity control agent wherein said thermoplastic viscosity control agent comprises micronized polyethersulfone; and

8 to 30 parts by weight of said thermoplastic fillet forming particles.